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Signature

September 15, 2006
Date of Signature

PATENT
Case No. GP-302117
(2760/58)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent application of:	
JEFFREY M. STEFAN, ET AL.	Examiner: LY, NGHI H.
Serial No.: 10/077,013	Group Art Unit: 2686
Filed: FEBRUARY 13, 2002	Conf. No.: 1333
For: METHOD FOR BROADCAST FILTERING USING CONVEX HULLS	

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Dear Sir:

Please consider Appellant's Reply brief as follows.

The Examiner continues to erroneously reject these claims, including an obviousness rejection of claims 1-3, 7-11, 15-17 and 20-21 over Wakamatsu in view of Dupray. Additionally, the Examiner mis-states Appellant's arguments.

In order to maintain the §103(a) rejection of claims 1-3, 7-11, 15-17, 20 and 21, three basic criteria must be met. First, there must be some *suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a *reasonable expectation of success*. Finally, the prior art references when combined must *teach or suggest all the claim limitations*. See MPEP 2143. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). See MPEP 2143.03. Because the references alone or in combination fail to teach, at a minimum, "determining whether the information location coordinate data resides within a convex hull" as claimed in claims 1, 9, 17, and 21, the §103(a) rejection must fall to those independent claims, as well as claims 2-3, 7-8, 10-11, 15-16 and 18-20 depending directly or indirectly from claims 1, 9 or 17 respectively.

The Examiner alleges that motivation to combine the references by stating "the motivation to do so found in the references themselves so that a convex hull of the verified locations may be used as a basis for determining a new of the target mobile station." (sic). Notably, the Examiner does not describe exactly what "new of the target mobile station" will be determined. Appellant also notes that this is an exact copy of the typographical error present in previous rejections.

The Examiner cannot assert that any implementation of the "Dupray" system would result in the desired determination of a "new of the target mobile station." First, the Examiner cannot assert that an implementation of the Dupray system in Wakamatsu would achieve the desirable "matching the current position of the vehicle detected by the vehicle position detection section" (col. 2, lines 29-30, Wakamatsu). The Dupray system is designed to estimate the location of a mobile vehicle, and would therefore be ill-adapted for matching as per Wakamatsu.

Additionally, there can be no motivation to combine these references in light of the fact that Wakamatsu does not denounce use of the current position of the vehicle as anything less than an ideal technique for acquiring information relevant to a desired area, and Dupray does not proclaim use of a convex hull as the ideal location estimator.

Indeed, Dupray does not teach or suggest the claimed elements, and the Examiner correctly states that Wakamatsu does not teach or suggest the claimed element. Dupray teaches a wireless location using multiple location estimators. The only discussion of "convex hulls" relates to attempts to locate a target mobile station ("MS"). In other words, the convex hull of Dupray is used to *locate* a MS, rather than to *provide information to a mobile vehicle user*. At most, Dupray teaches (in col. 6):

> For example, for a wireless location system utilizing the present invention, each location hypothesis, H, identifies an area for a target MS, and H can used to identify additional related locations included in archived hypotheses generated by the same FOM as generated H. For instance, such related locations may be the area centroids of the archived hypotheses, wherein these centroids reside within the area hypothesized by H. Accordingly, such centroids may be used to retrieve the corresponding actual verified MS locations (i.e., the corresponding desired results), and these retrieved verified locations may be used to generate a new adjusted area that is likely to be more accurate than H. In particular, a convex hull of the verified locations may be used as a basis for determining a new location hypothesis of the target MS.

Even if Dupray teaches the term "convex hull," Dupray teaches use of a convex hull to *locate* a MS, rather than to *determine whether an information location coordinate resides within a convex hull*. Instead, Dupray teaches that the convex hull is used to determine a new location hypothesis of the target MS. In other words, Dupray is trying to locate a device, while the instant application already knows the location of the device.

Furthermore, Dupray teaches away from presenting the broadcast information to the mobile vehicle user based on the determination, and therefore teaches away from the combination with Wakamatsu. Dupray teaches only methods of locating a

vehicle – one of ordinary skill in the art would not be motivated to present a mobile vehicle user with an estimate of their location based on a convex hull of their possible locations. Either a mobile vehicle user knows their current location and therefore does not need to receive a guess or hypothesis of their location, or the mobile vehicle user does not know their current location (such as a lost driver) and an estimate of their location based on a convex hull is of questionable utility.

There can be no motivation to combine a received information processing apparatus and wireless location using multiple location estimators. The rationale to modify or combine the prior art may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. MPEP §2144, *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (setting forth test for implicit teachings); *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) (references do not have to explicitly suggest combining teachings); *Ex parte Clapp*, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985) (examiner must present convincing line of reasoning supporting rejection); and *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning). The Examiner properly does not cite to any express or implied teachings in either Wakamatsu or Dupray, as neither reference, alone or in combination, provides any such teaching. Therefore, the Examiner must be attempting to rely on either knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. The Examiner makes no citation to any established scientific principles, or precedent established by prior case law, and therefore can only be relying on knowledge generally available to one of ordinary skill in the art.

However, the Examiner provides no evidence of the level of ordinary skill in the art. In a case such as this, where the Examiner is improperly attempting to combine disparate references teaching received information processing apparatus and wireless location using multiple location estimators, the Examiner's omission of any

details regarding the level of skill of one in the art is especially telling. The mere fact that references can be combined is not sufficient to establish obviousness under 35 U.S.C. §103(a). *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990), MPEP §2143.01.

Additionally, claims 2-3, 7-8, 10-11, 15-16, 20 and 21 depend directly or indirectly from one of claims 1, 9 or 17 and are therefore patentable for at least the same reasons.

Withdrawal of the rejections to claims 1-3, 7-11, 15-17, 20 and 21 is requested.

With respect to the rejections of claims 4-6, 12-14, 18 and 19 as unpatentable over Dupray, Wakamatsu and Park, these rejections are traversed. Each of claims 4-6, 12-14, 18 and 19 depends directly or indirectly from one of claims 1, 9 and 17, and is therefore patentable over the references for at least the same reasons as above.

In addition, Park does not teach or suggest generating a convex hull from the recorded vehicle location coordinates, as claimed in claim 4. The Examiner's allegation (that Park teaches generating the geographic point from the recorded vehicle location coordinates) is irrelevant. The Examiner is arguing that Park teaches something that is not claimed – even if the argument is true, the argument bears no relation to the claims. Therefore, the claims are patentable over the combination of Wakamatsu, Dupray, and Park for at least this additional reason.

Furthermore, contrary to the Examiner's assertion, the combination of Wakamatsu and Dupray does not teach or suggest "generating the convex hull as recited in claim 1." Appellants note that the Examiner has mischaracterized the elements of claim 1. Wakamatsu makes no teachings relating to convex hulls, as acknowledged by the Examiner, and at most, Dupray teaches that a convex hull is generated based on verified locations (col. 6, lines 13-15) based on the area centroids of the archived hypotheses wherein the centroids reside within the area hypothesized. At most, Dupray teaches generating a convex hull based on hypothetical locations, rather than recording a plurality of vehicle location coordinates (claim 4) and therefore teaches away from the combination as suggested by the Examiner.

Withdrawal of the rejections to claims 4-6, 12-14, 18 and 19 is requested.

The §103(a) rejection of claim 22 is traversed.

Claim 22 depends from claim 21, and is therefore patentable over the references for at least the same reasons as above.

Additionally, the Examiner's attempted combination of Wakamatsu, Dupray and Stewart evidences the Examiner's use of impermissible hindsight. There is no teaching or motivation to "provide the teaching of Stewart into the system of Wakamatsu and Dupray so that information is retrieved which is within a predetermined position relative to the repeated travel pattern." Appellants' 'teach away' arguments asserted above are equally valid as applied to the three way combination of references.

First, the Examiner mistakes the claimed elements. Claim 21 requires receiving broadcast information at the mobile vehicle and presenting the broadcast information to the mobile vehicle user based on the determination of whether the information location coordinates reside within a convex hull. Claim 21 does not require the "retrieval" of any information, and therefore the Examiner fails to even allege a prima facie case of obviousness.

Second, there can be no proper motivation to combine the location estimates taught by Dupray with Stewarts providing promotional material based on repeated travel patterns. None of the three references teach the claimed convex hull from claim 21, and none of the three references teach that the convex hull represents an area in which a mobile vehicle user often drives. The mere fact that references can be combined is not enough to prove obviousness under §103(a). *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990), MPEP §2143.01.

Withdrawal of the rejection to claim 22 is requested.

SUMMARY

The Examiner's rejections of claims 1-22 have been obviated by remarks herein supporting an allowance of pending claims 1-22 over the art of record. The Appellant respectfully submits that claims 1-22 herein fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. In view of the foregoing, favorable consideration and passage to issue of the present application is respectfully requested. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Dated: **September 15, 2006**

Respectfully submitted,
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